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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813,596	03/31/2004	Anthony L. Chun	042390.P18369	4364

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INTEL CORPORATION
c/o INTELLEVATE, LLC
P.O. BOX 52050
MINNEAPOLIS, MN 55402

EXAMINER

YAARY, MICHAEL D

ART UNIT	PAPER NUMBER
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2193

MAIL DATE	DELIVERY MODE
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05/29/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/813,596	Applicant(s) CHUN ET AL.	
	Examiner Michael Yaary	Art Unit 2193	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-21 are pending in the application.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 8-14 are rejected under 35 U.S.C. 101, as the claims are directed to non-statutory subject matter.

(i) As to claim 8, the claim is not limited to tangible embodiments. In view of Applicant's disclosure, specification page 5, [0020], lines 7-11, the "machine-readable medium," is not limited to tangible embodiments. Instead, it's being defined as including both tangible embodiments (e.g., ROM, RAM, magnetic disk storage, and flash memory devices) and intangible embodiments (e.g. carrier waves, infrared signals, digital signals, etc.). As such, the claim is not limited to statutory subject matter and is therefore non-statutory. To overcome this type of 101 rejection the claims need to be amended to include only the physical computer media and not a transmission media or other intangible or non-functional media.

(ii) Claims 9-14 are rejected for similar reasons as discussed for their respective parent claim, as they fail to present any limitations that resolve the deficiencies of the claim from which they depend.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-4, 7, 8-11, 14, 15-18, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmitz (US Pat. 5,128, 871) in view of Goss et al. (hereafter Goss)(US Pat. 4, 667, 290).

6. **As to claims 1, 8, and 15**, Schmitz discloses parsing said function into a parsed group selected from a group consisting of instruction data, a constant, a coefficient, and a factor (column 16, lines 11-25); converting one or more of said parsed group into one or more operation codes, where an operation code is a numeric representation for each of said parsed group (column 18, lines 15-20 and column 43, lines 38-49); determining said one or more operation codes to be executed on a processing element (column 43, lines 38-49); combining said one or more operation codes into a file (column 16, lines 26-33); and converting said file into a state machine representation (column 26, lines 15-19; column 16, lines 26-33; and column 2, lines 1-9).

7. Schmitz does not disclose receiving a function in assembly code. However, Goss discloses receiving a function in assembly code (column 3, lines 47-60).

8. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Schmitz, by utilizing machine instructions, assembly code, as taught by Goss, for the benefit of provide quicker execution of programs in less space. One would be motivated to make the combination using a low level language, such as assembly, as it is critical for hardware manipulation and the addressing of performance issues.

9. **As to claims 2, 9, and 16** Schmitz further discloses assigning each of said one or more operation codes a state, wherein an output of said state is an operation number (column 3, lines 5-22); determining a next state for each of said one or more operation codes, wherein said next state is a function of said state and input signal (column 1, lines 38-47 and column 3, lines 5-22); associating said operation number with a reconfigurator vector (column 6, lines 28-36); and generating a state equation for each state (column 3, lines 13-22 and column 17, lines 5-13).

10. **As to claims 3, 10, and 17** Schmitz further discloses mapping said state equations to a control unit reconfigurable logic array (column 1, lines 38-47 and column 11, lines 41-62); and programming a fuse map for said control unit reconfigurable logic array (column 2, lines 17-29 and column 4, lines 40-48).

11. **As to claims 4, 11, and 18** Schmitz further discloses producing an output reconfigurator vector look-up table, wherein said reconfigurator vector look-up table converts said operation number to a reconfigurator vector (column 6, lines 14-27 and column 67, lines 21-27).

12. **As to claims 7, 14, and 21** Schmitz and Goss do not disclose said processing element includes at least one micro-coded accelerator. Examiner is taking official notice that employing an accelerator was well know in the art at the time the invention was made.

13. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Schmitz and Goss, by employing the well-known knowledge of code accelerators, for the benefit of performing faster processing of functions.

14. Claims 5, 6, 12, 13, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schimtz in view of Goss as applied to claim 4 above, and further in view of Sikdar (US Pat. 7,130,987).

15. **As to claims 5, 12, and 19**, Schmitz and Goss do not disclose creating a configuration packet; downloading said configuration packet to said processing element; and programming said processing element with said configuration packet.

However, Sikdar discloses creating a configuration packet (column 1, line 62-column 2, line 8); downloading said configuration packet to said processing element (column 3, lines 12-24 and column 10, lines 18-40); and programming said processing element with said configuration packet (column 1, line 62-column 2, line 8).

16. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Schmitz and Goss, by utilizing configuration packets, as taught by Sikdar, for the benefit of maintaining fast and efficient processing.

17. **As to claims 6, 13, and 20**, Sikdar discloses said configuration packet includes data selected from a group consisting of said fuse map, said output reconfigurator vector look-up table, said parsed group, one or more fuse maps for other control unit reconfigurable logic arrays, routing information, one or more processing element addresses, and packet sizes (column 3, lines 12-24).

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Yaary whose telephone number is (571) 270-1249. The examiner can normally be reached on Monday-Friday, 8:00 a.m - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MY



MENG-AI T. AN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2193